User Manual of Omnik TL2 Internal Data Collector

Omnik New Energy Co., Ltd.

Catalog

1. Unpacking 2

2. PV Data Collector 2

3. S/N Label 3

4. WiFi Installation 3

5. WiFi Card Information 6

6. Register on Monitoring Website 8

6.1 Register New Account 8

6.2 Fill in User's Information 8

7. Network Settings 11

8. Login Monitoring System 20

9. IPhone & iPad Application 25

9.1 Auto Mode 25

9.2 Manual Mode 27

10. Contact 29

Appendix. 30

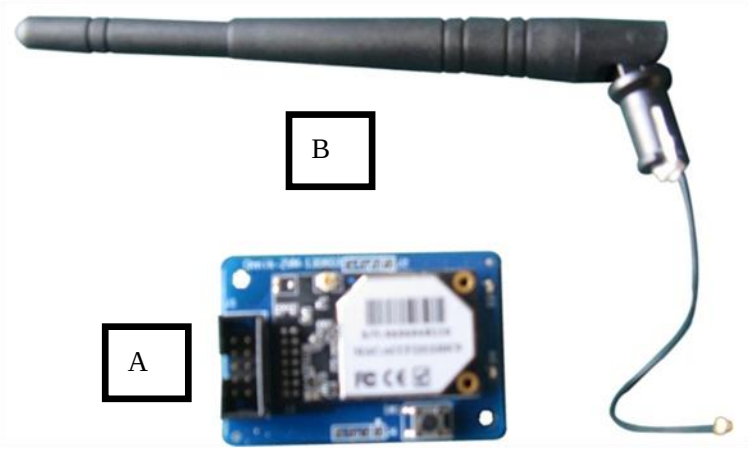
1.LED Indicators 30

2.Troubleshooting 31

1. Unpacking

If your inverter had installed the WiFi card, please go to **6. Register on monitoring website.**

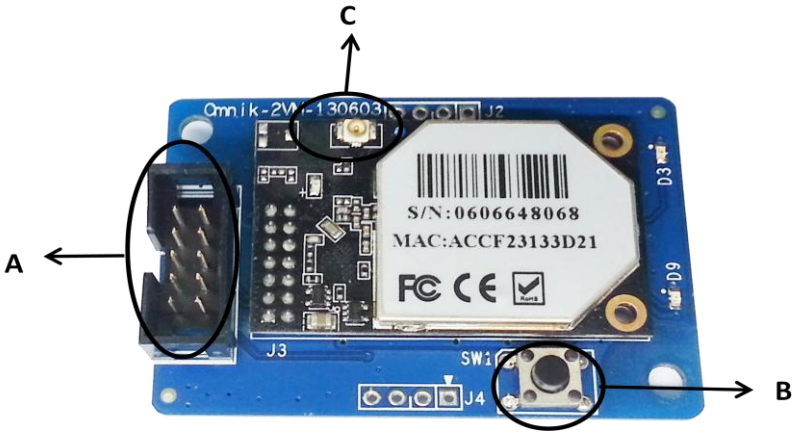
After unpacking the box, please check the parts according to the below list. Contact the manufacturer immediately, should if you find any damage, missing or wrong model.



Picture 1-1

No.	Name	Quantity
A	PV data collector	1
B	WiFi antenna	1

2. PV Data Collector



Picture 2-1

No.	Name
A	10 pin connector
B	Reset Button
C	I-PEX Interface

3. S/N Label

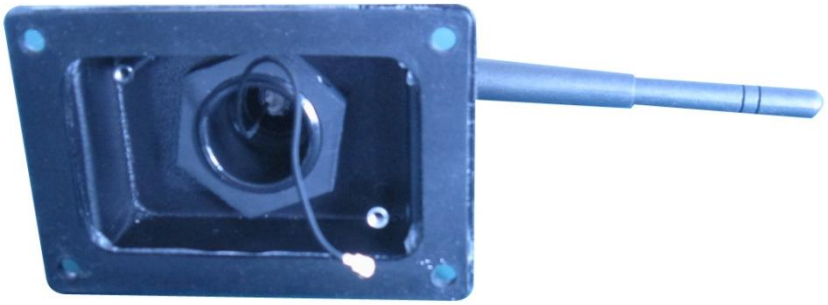
Picture 3-1

4. WiFi Card Installation

Warning: Before installing the WiFi module to inverter, you must turn off both the AC side and DC side of inverter to make sure personal safety.

Picture 4-1

Unscrew the four screws on the interface panel with the screwdriver as shown in **Picture 4-1** and keep the screws aside.



Picture 4-2

Insert the WiFi antenna through the gland and screw the hex nut with a torque of 2.0 N.m as **Picture 4-2**.

Picture 4-3

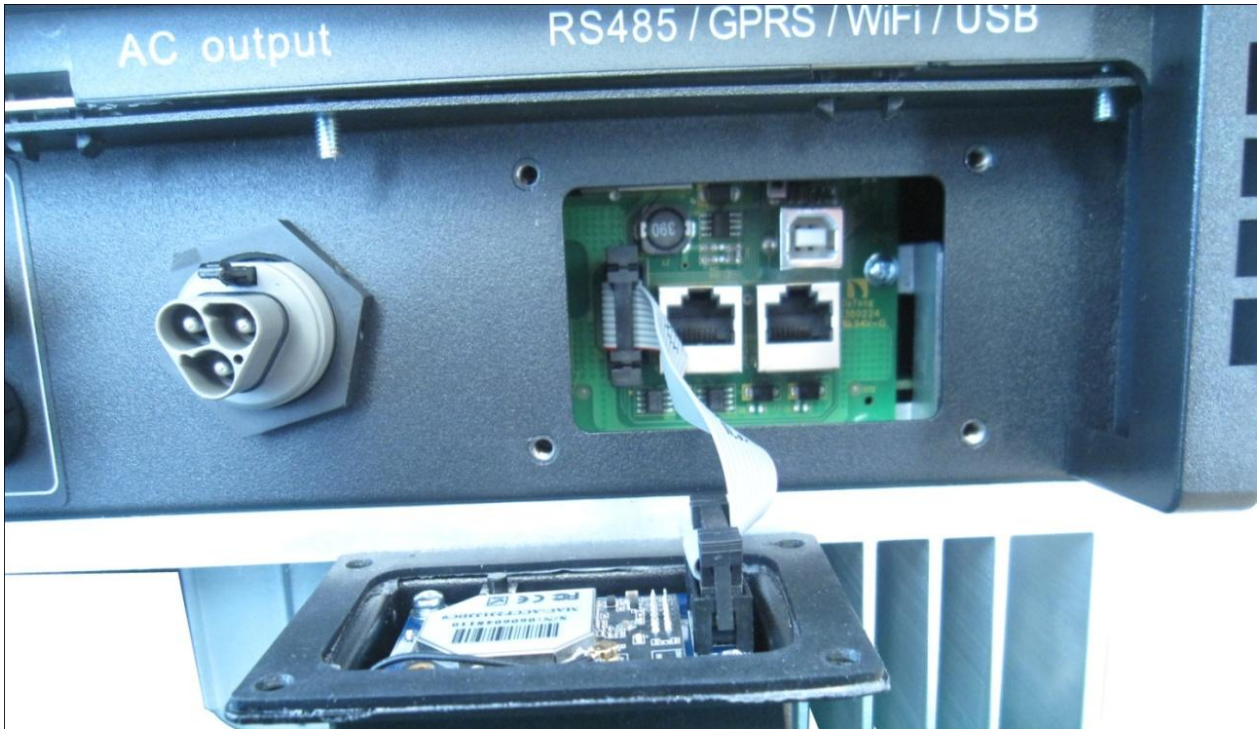
Plug the PV antenna connector into the socket circled in **Picture 4-3**.

Picture 4-4

Fix PV data collector to the case with two screws as **Picture 4-4**.

Picture 4-5

Turn the switch on the communication board inside of the inverter to the upside as **Picture 4-5**.



Picture 4-6

Connect the PV data collector to the communication board with communication bus cable as **Picture 4-6**.

Picture 4-7

Tighten the water-proofing case tightly to the inverter with 4 screws as **Picture 4-7** and the installation is completed. Antenna is properly mounted and can be turned in 360 degrees.

5. WiFi Card Information

After installation of WiFi Module, turn on AC side of inverter to display the WiFi information.

Picture 5-1

Click **“ENTER”** button at the display panel until the screen shows WiFi information. It includes S/N: xxxxxx and IP address as **Picture 5-1**.

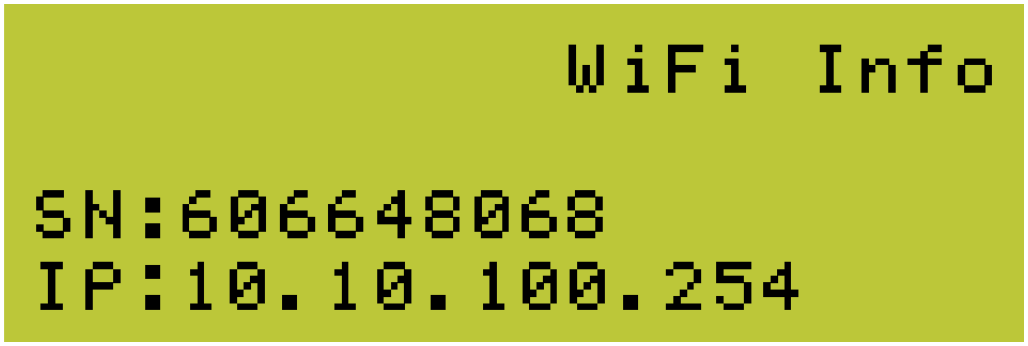
IP address has three kind values:

Picture 5-2: 0.0.0.0 (router SSID & password is not found by WiFi card, if you have not set connect your router, factory value)

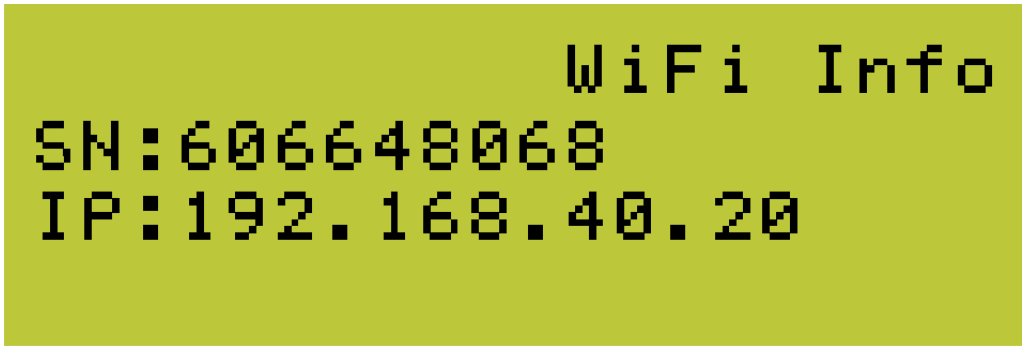
Picture 5-3: 10.10.100.254 (restore default value)

Picture 5-4: 192.168.40.20 (after setting ok)

Picture 5-2



Picture 5-3



Picture 5-4

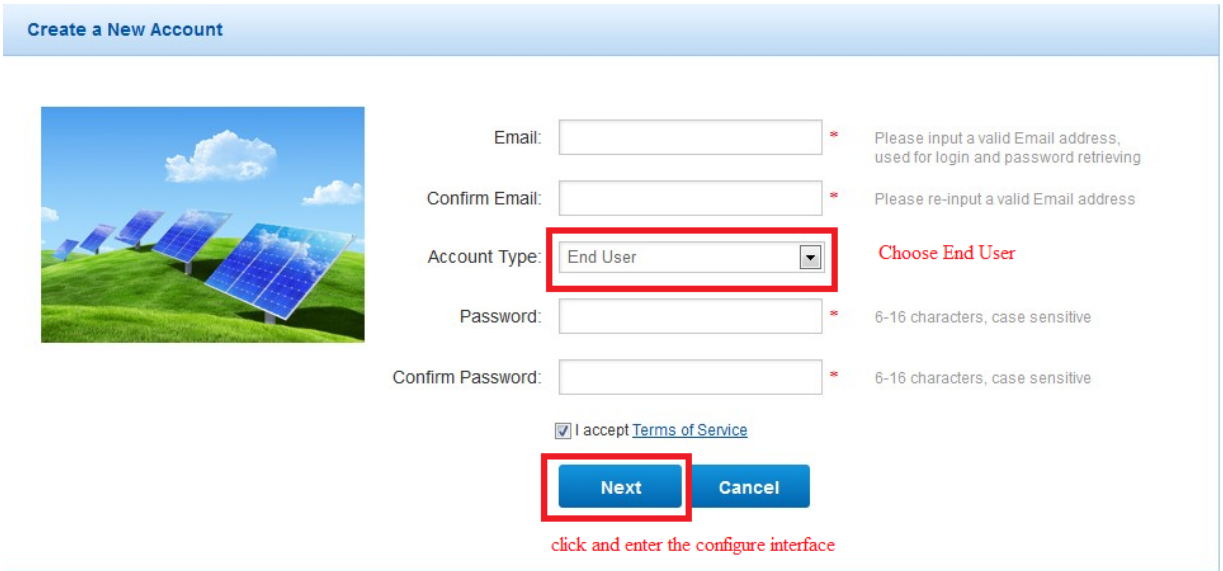
6. Register on Monitoring Website

Omnik's PV monitoring system is supported by: IE8, Firefox, Chrome, and Safari. Login the website **http://www.omnikportal.com**, click register to enter the user registration page, follows the requirements for registration; please fill in the information for register. After successful registration, enter the mailbox and activity the account, then to complete the registration.

6.1 Register New Account

Picture 6-1

6.2 Fill in User's Information

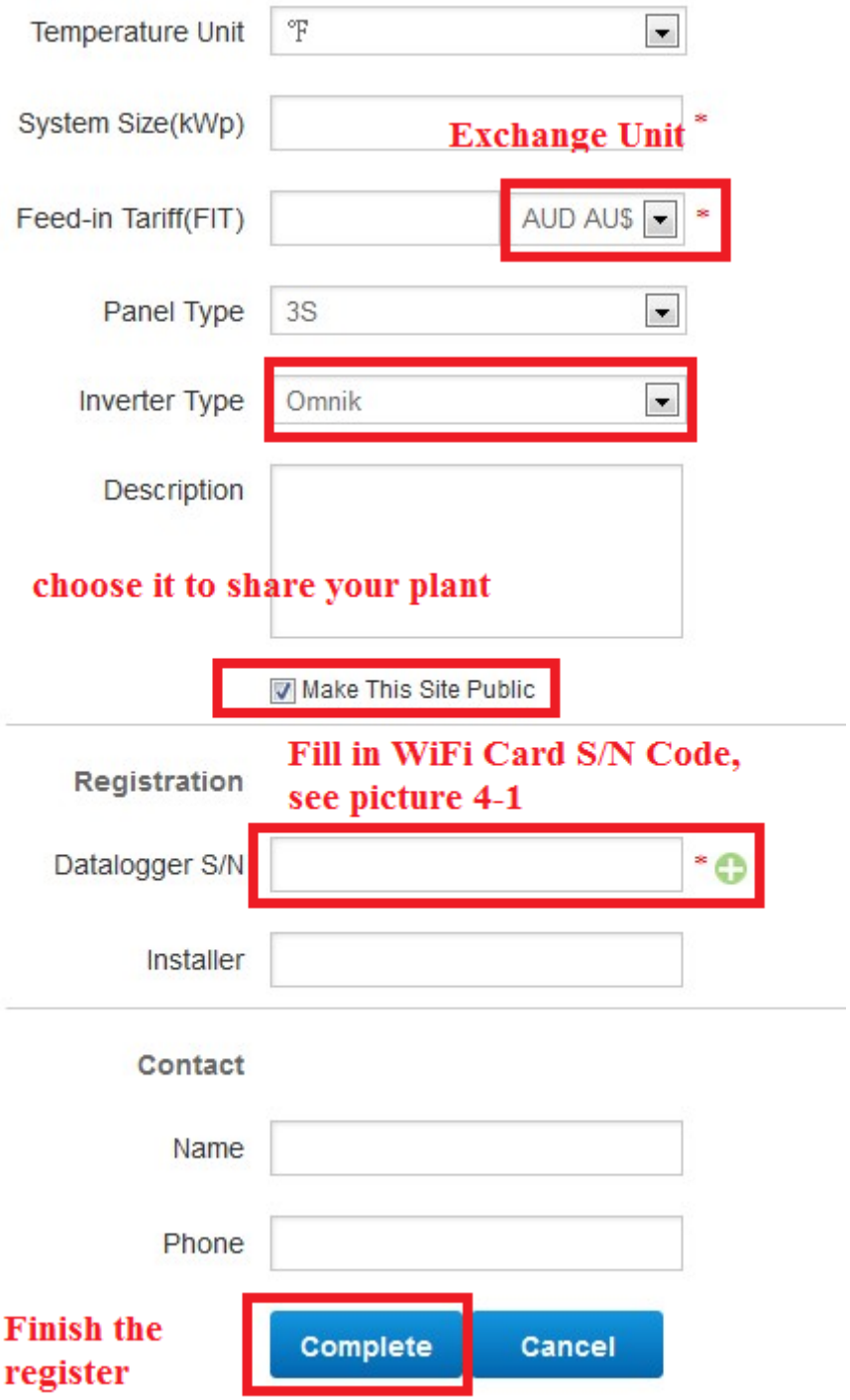


Picture 6-2

Remarks: please read the < Omnik service agreement > carefully, the enclosure is the cost list for all the countries; please choose your operators ***End User*** *means the final user*

"*" *you must fill it*

"End User" Account

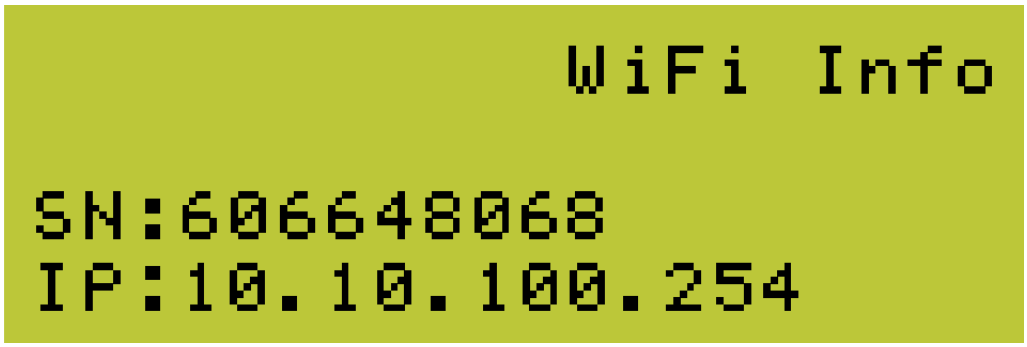


Picture 6-3

After the register, you may enter next chapter **7. Network Settings** (In AP mode by WiFi)

7. Network Settings

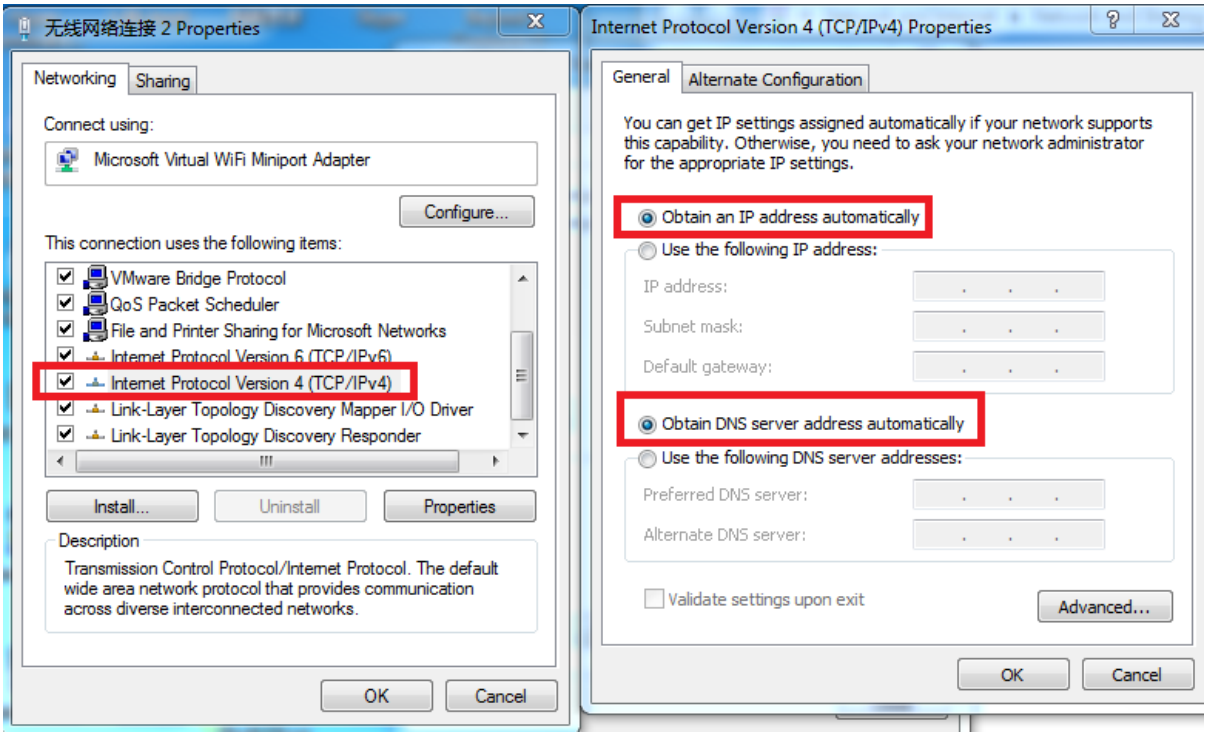
Make sure the AC side of inverter is connected to the grid and keep the display on.



Picture 7-1

1) Prepare a computer or device, e.g. tablet PC and smart phone that enables WiFi.
2) Obtain an IP address automatically:

- Open Wireless Network Connection Properties, double click **"Internet Protocol Version 4(TCP/IPv4)"**.
- Select Obtain an IP address automatically, and **click "OK"**.



Picture 7-2

3) Open wireless network connection and click **"View Wireless Networks"**:

Select wireless network of the data logging module, no passwords required as default. The network name consists of **AP** and the **serial number** of the product. Then click

“Connect”.

Picture 7-3

Picture 7-4

Connection successful

*Notice: If **AP_ (serial number of product)** is not available in the wireless network list, there may be problems in the connection or setting of data logging module. Please check if the WiFi had installed ok, and inverter has been powered on.*

Before troubleshooting, please inquire with your inverter installer whether you are allowed to remove the cover of the inverter to trouble shoot the module. If not allowed, please contact customer service.

4) Set parameters of WiFi module:

(a) Open a web browser, and enter 10.10.100.254 (the Default IP address of WiFi card, you may set domain name access as **picture 7-5**), then fill in username: **admin** and password: **admin**, both of which are admin as default.

Recommended browsers: Internet Explorer 8+, Google Chrome 15+, Firefox 10+

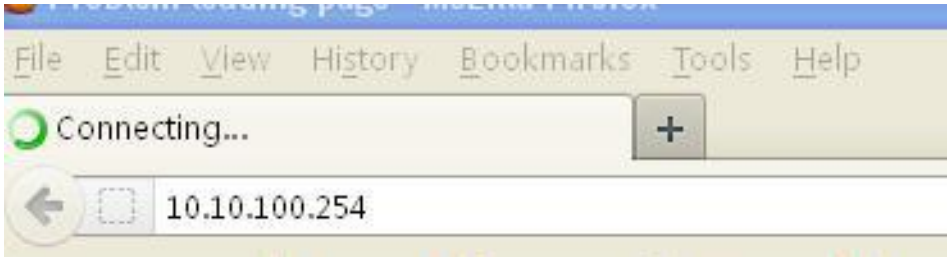
Note:

① *If the IP address shows **0.0.0.0** (factory value) on your LCD (**Picture 5-2**), it is not a correct address. There are 2 cases show 0.0.0.0:*

- *Not connect router rightly, you need reset to connect you router to make it right. You can reset data collector by press reset button for about 5s or reset it in the wizard interface*
- *Card loose in the inverter, please check your inverter according chapter **4.WiFi Card Installation***

② *The default username & password : **admin**, **admin**, we suggest modify the username & password:*

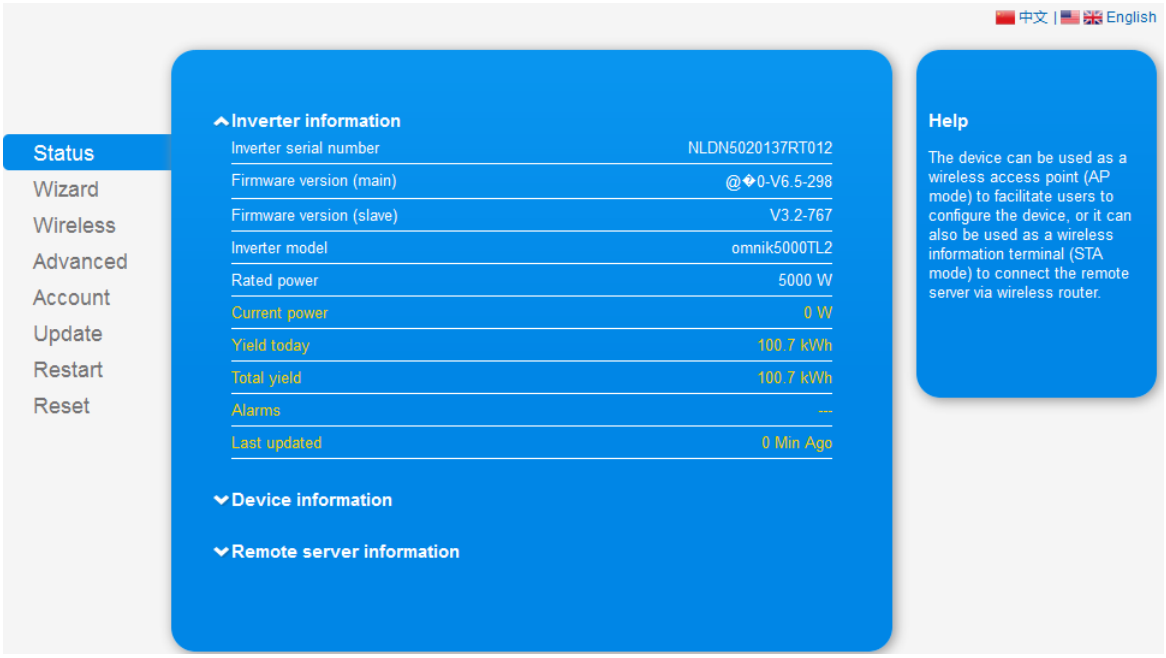
Step: choose Account; input your username &password.



Picture 7-5

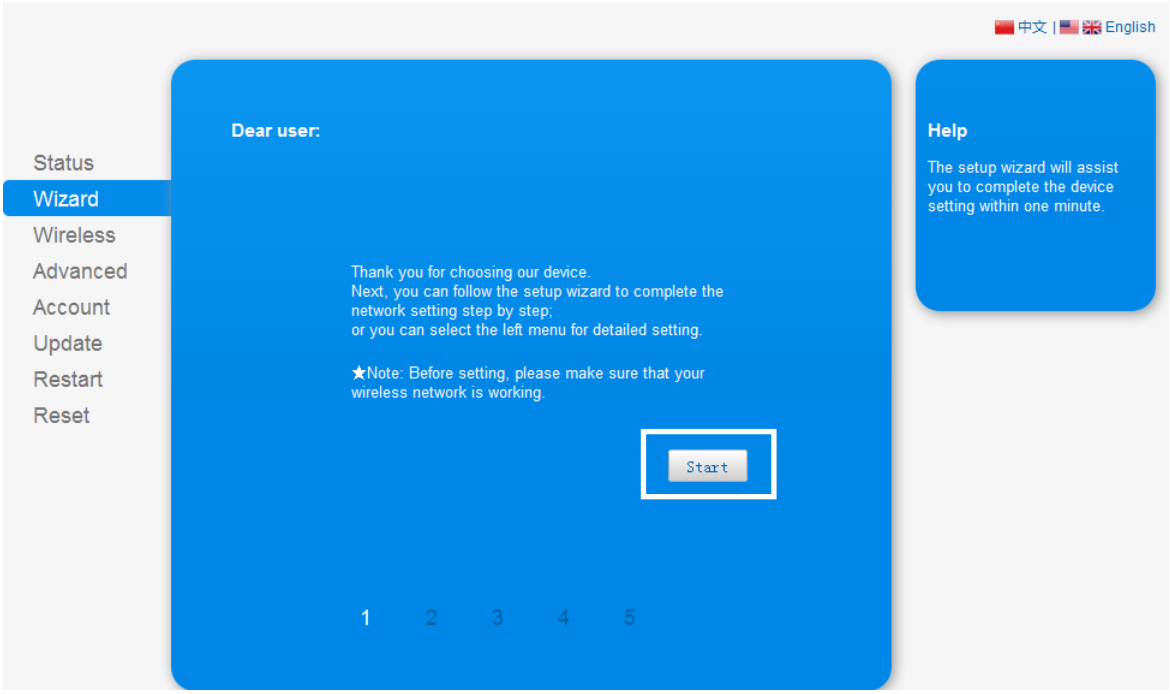
(b) In the configuration interface of WiFi module, you can view general information of the module.

Follow the setup wizard to start quick setting.


中文 | English
Status
Wizard
Wireless
Advanced
Account
Update
Restart
Reset
Inverter information
Inverter serial number NLDN5020137RT012
Firmware version (main) @0-V6.5-298
Firmware version (slave) V3.2-767
Inverter model omnik5000TL2
Rated power 5000 W
Current power 0 W
Yield today 100.7 kWh
Total yield 100.7 kWh
Alarms ---
Last updated 0 Min Ago
Device information
Remote server information
Help
The device can be used as a wireless access point (AP mode) to facilitate users to configure the device, or it can also be used as a wireless information terminal (STA mode) to connect the remote server via wireless router.

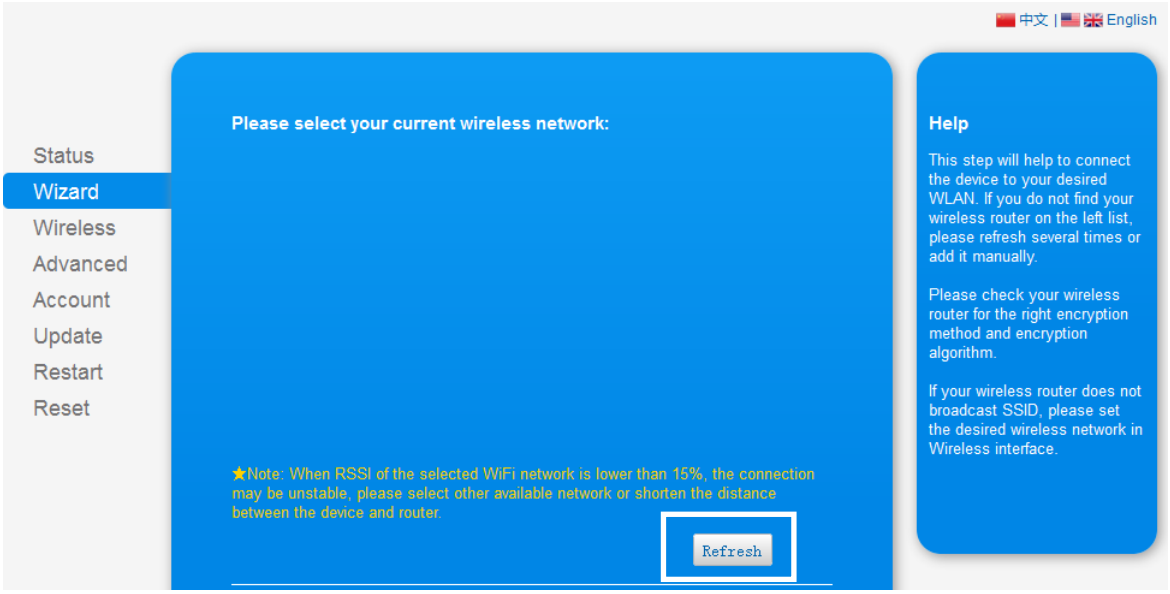
Picture 7-6

Click **“Wizard”** to start


中文 | English
Status
Wizard
Wireless
Advanced
Account
Update
Restart
Reset
Dear user:
Thank you for choosing our device.
Next, you can follow the setup wizard to complete the network setting step by step;
or you can select the left menu for detailed setting.
★Note: Before setting, please make sure that your wireless network is working.
Start
1 2 3 4 5
Help
The setup wizard will assist you to complete the device setting within one minute.

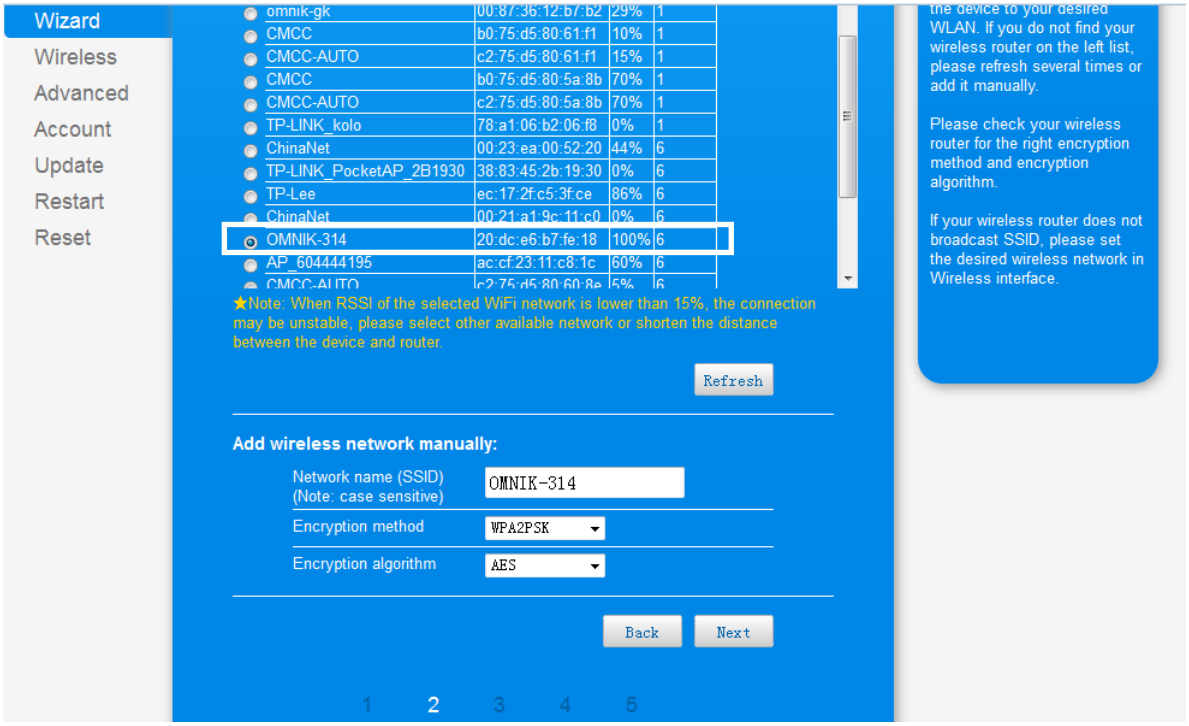
Picture 7-7

Click **“Start”** to continue


中文 | English
Status
Wizard
Wireless
Advanced
Account
Update
Restart
Reset
Please select your current wireless network:
★Note: When RSSI of the selected WiFi network is lower than 15%, the connection may be unstable, please select other available network or shorten the distance between the device and router.
Refresh
Help
This step will help to connect the device to your desired WLAN. If you do not find your wireless router on the left list, please refresh several times or add it manually.
Please check your wireless router for the right encryption method and encryption algorithm.
If your wireless router does not broadcast SSID, please set the desired wireless network in Wireless interface.

Picture 7-8

Click **"Refresh"** to search available wireless networks, or add it manually input


Wizard
Wireless
Advanced
Account
Update
Restart
Reset
CMCC b0:75:d5:80:61:f1 10% 1
CMCC-AUTO c2:75:d5:80:61:f1 15% 1
CMCC b0:75:d5:80:5a:8b 70% 1
CMCC-AUTO c2:75:d5:80:5a:8b 70% 1
TP-LINK_kolo 78:a1:06:b2:06:f8 0% 1
ChinaNet 00:23:ea:00:52:20 44% 6
TP-LINK_PocketAP_2B1930 38:83:45:2b:19:30 0% 6
TP-Lee ec:17:2f:c5:3f:ce 86% 6
OMNIK-314 20:dc:e6:b7:fe:18 100% 6
AP_604444195 ac:cf:23:11:c8:1c 60% 6
★Note: When RSSI of the selected WiFi network is lower than 15%, the connection may be unstable, please select other available network or shorten the distance between the device and router.
Refresh
Add wireless network manually:
Network name (SSID) (Note: case sensitive)
OMNIK-314
Encryption method
WPA2PSK
Encryption algorithm
AES
Back
Next
1 2 3 4 5
WLAN. If you do not find your wireless router on the left list, please refresh several times or add it manually.
Please check your wireless router for the right encryption method and encryption algorithm.
If your wireless router does not broadcast SSID, please set the desired wireless network in Wireless interface.

Picture 7-9

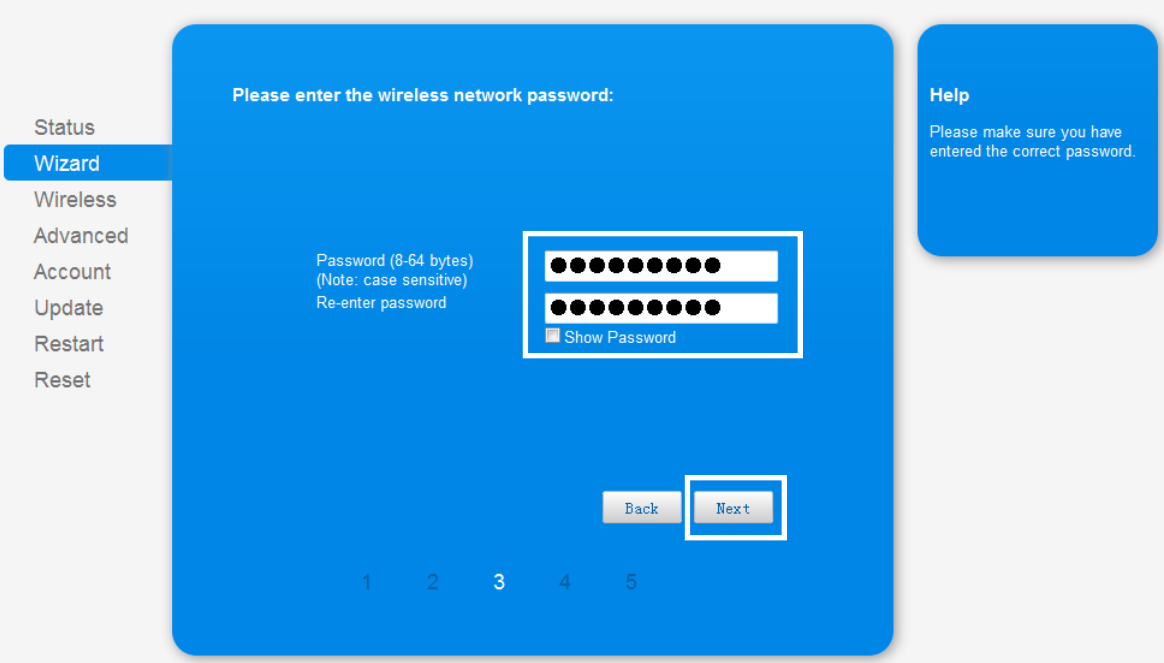
Select the wireless network you need to connect, and then click **"Next"**

Notice:

① If the signal strength (RSSI) of the selected network is <10%, which means unstable connection, please adjust the antenna of the router, or use a repeater to enhance the signal.

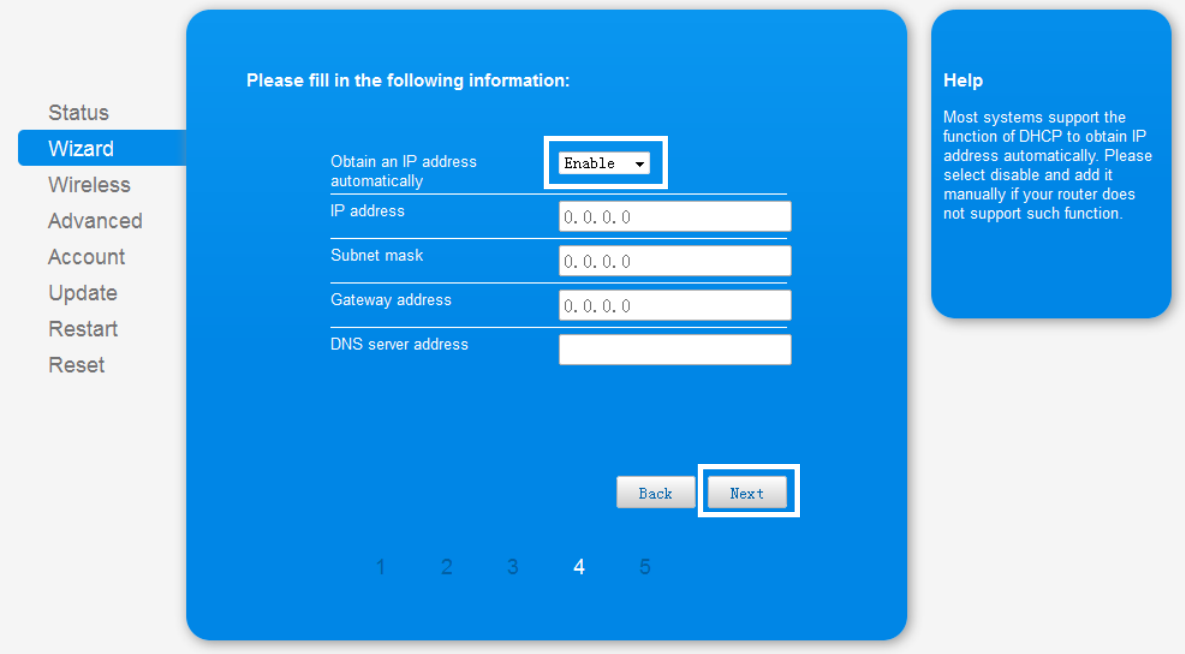
② We recommend router setting:

- *Security setting: WPA2-personal*
- *Encryption type: AES*



Picture 7-10

Enter the password for the selected network, and then click **"Next"**



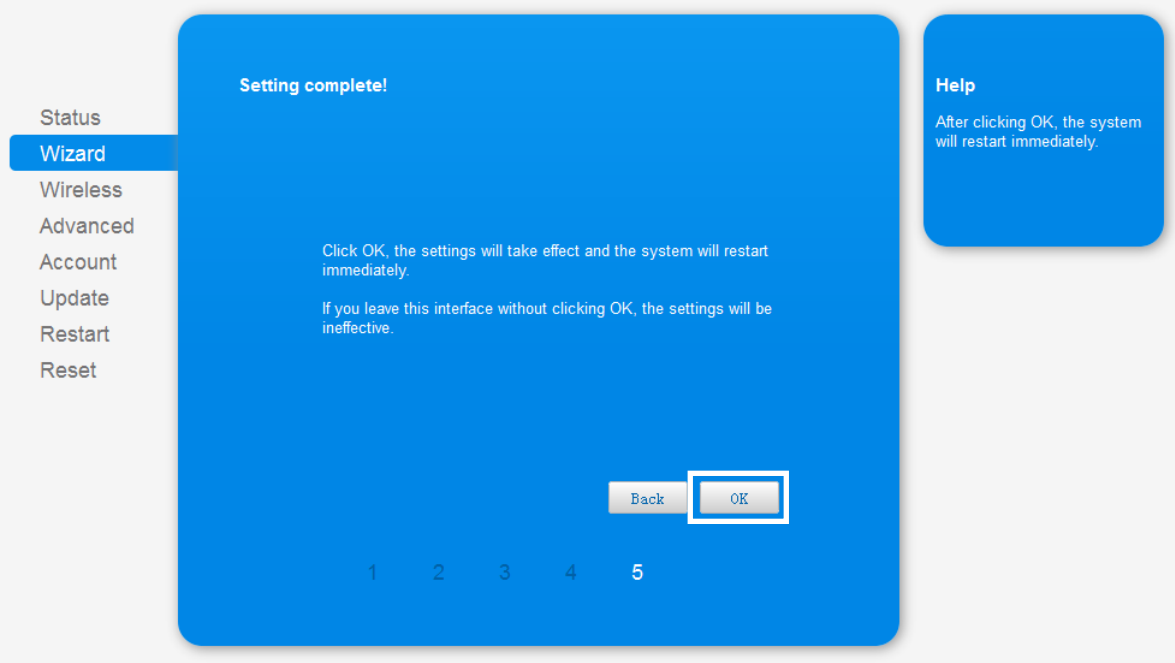
Picture 7-11

Select **"Enable"** to obtain an IP address automatically, then click **"Next"**

Notice:

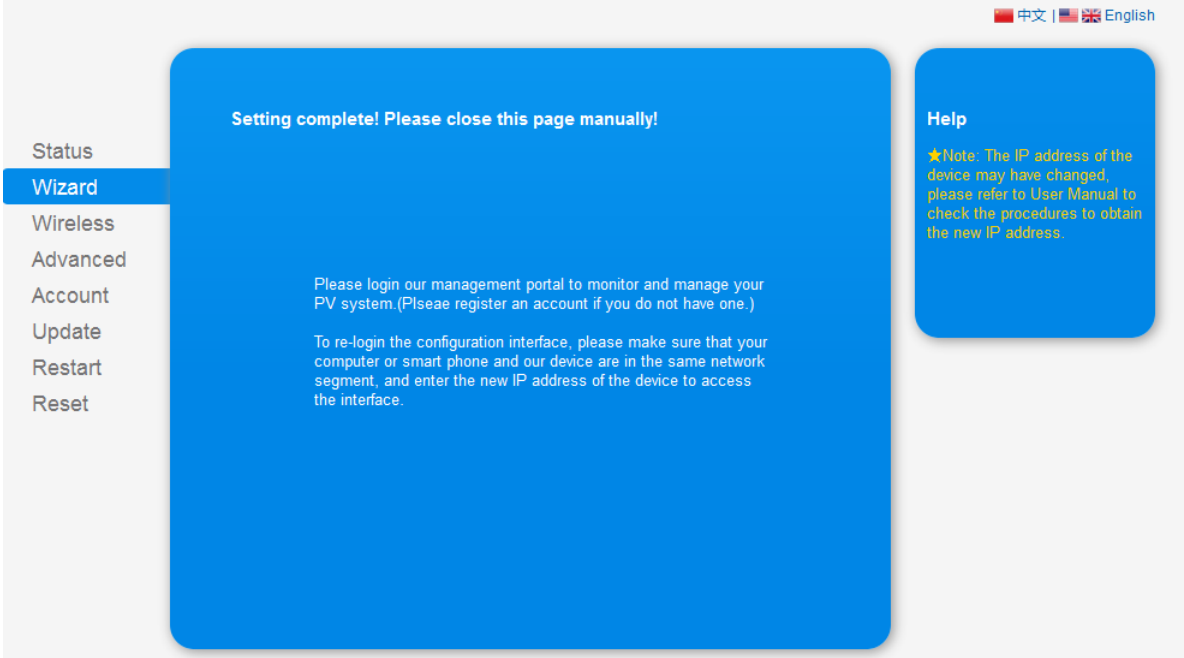
① Turn off the firewall of the router

② Make sure the DHCP function of the router is enable



Picture 7-12

If setting is complete, the above page will display. Click **"OK"** to restart.

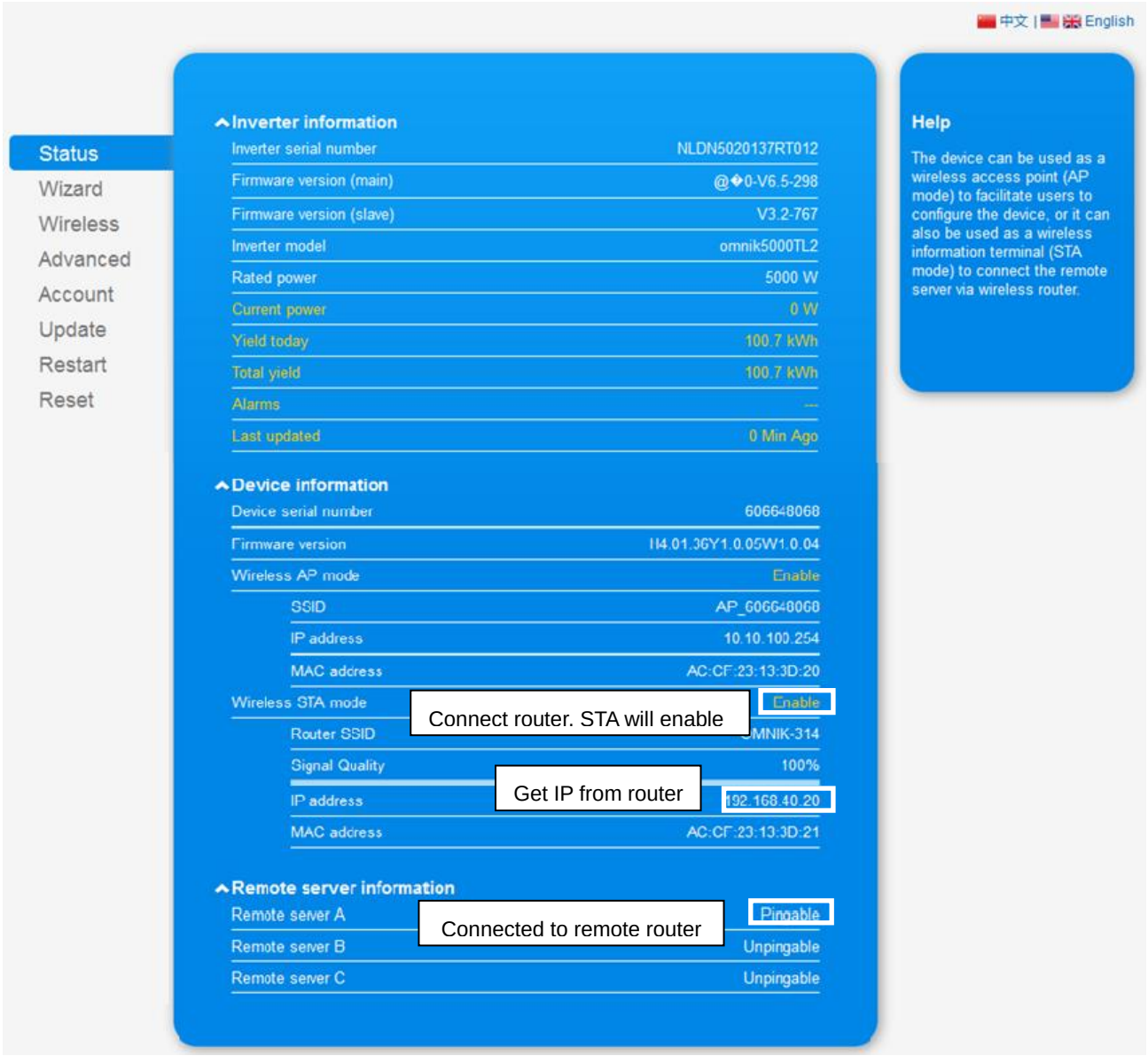

中文 | English
Status
Wizard
Wireless
Advanced
Account
Update
Restart
Reset
Setting complete! Please close this page manually!
Please login our management portal to monitor and manage your PV system.(Plseae register an account if you do not have one.)
To re-login the configuration interface, please make sure that your computer or smart phone and our device are in the same network segment, and enter the new IP address of the device to access the interface.
Help
★Note: The IP address of the device may have changed, please refer to User Manual to check the procedures to obtain the new IP address.

Picture 7-13

If setting is complete, the above page will display after about 10s.

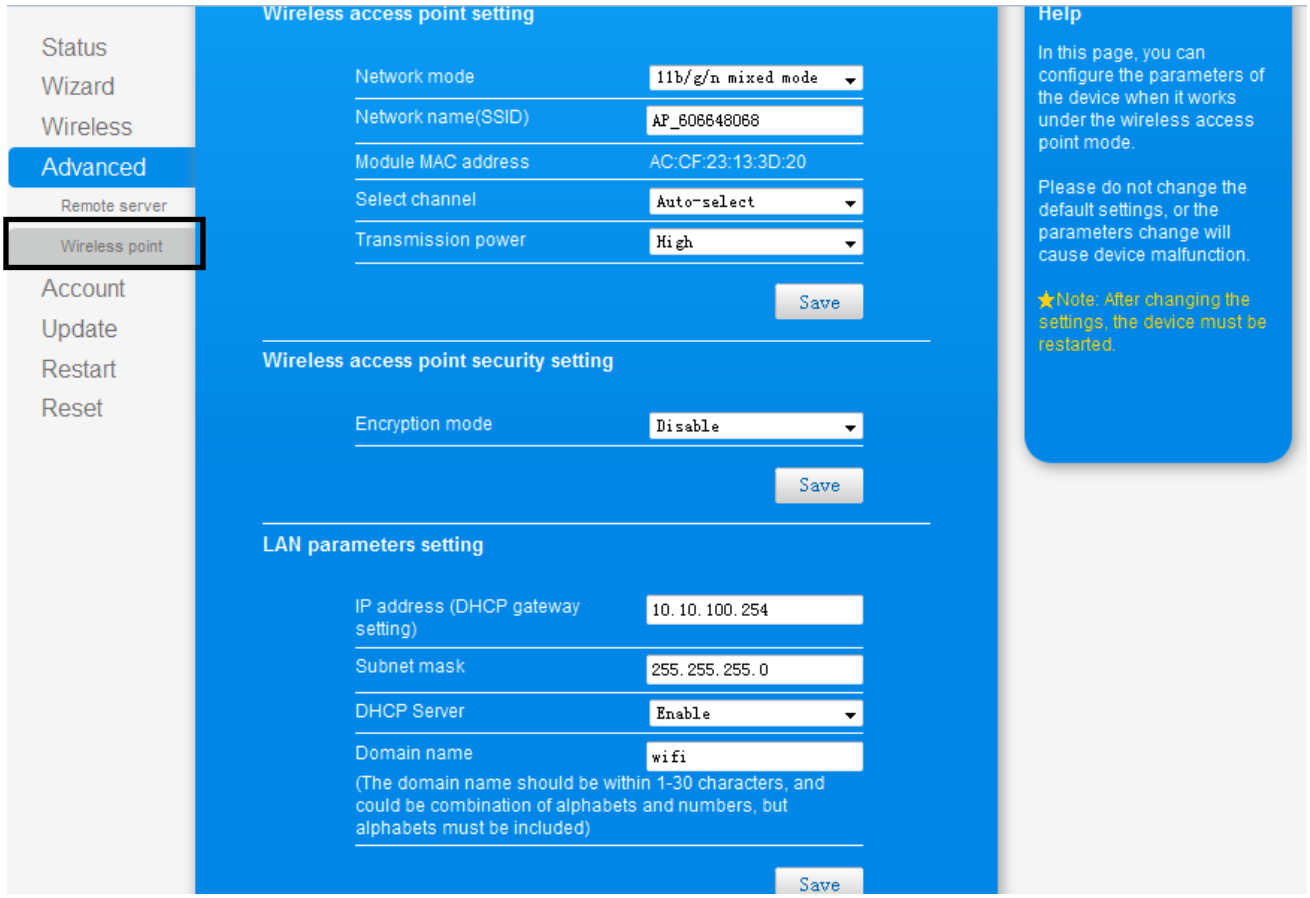
After your WiFi card set ok and get IP address from your router for example: 192.168.40.20, (You may see the IP address from LED as **picture 5-4**)

Input: **http://192.168.40.20/** will display the following page:



Picture 7-14

You may also add your domain name of WiFi card to easy access according below picture, after you set ok, input **http://wifi**, you may also access the related page:



Picture 7-15

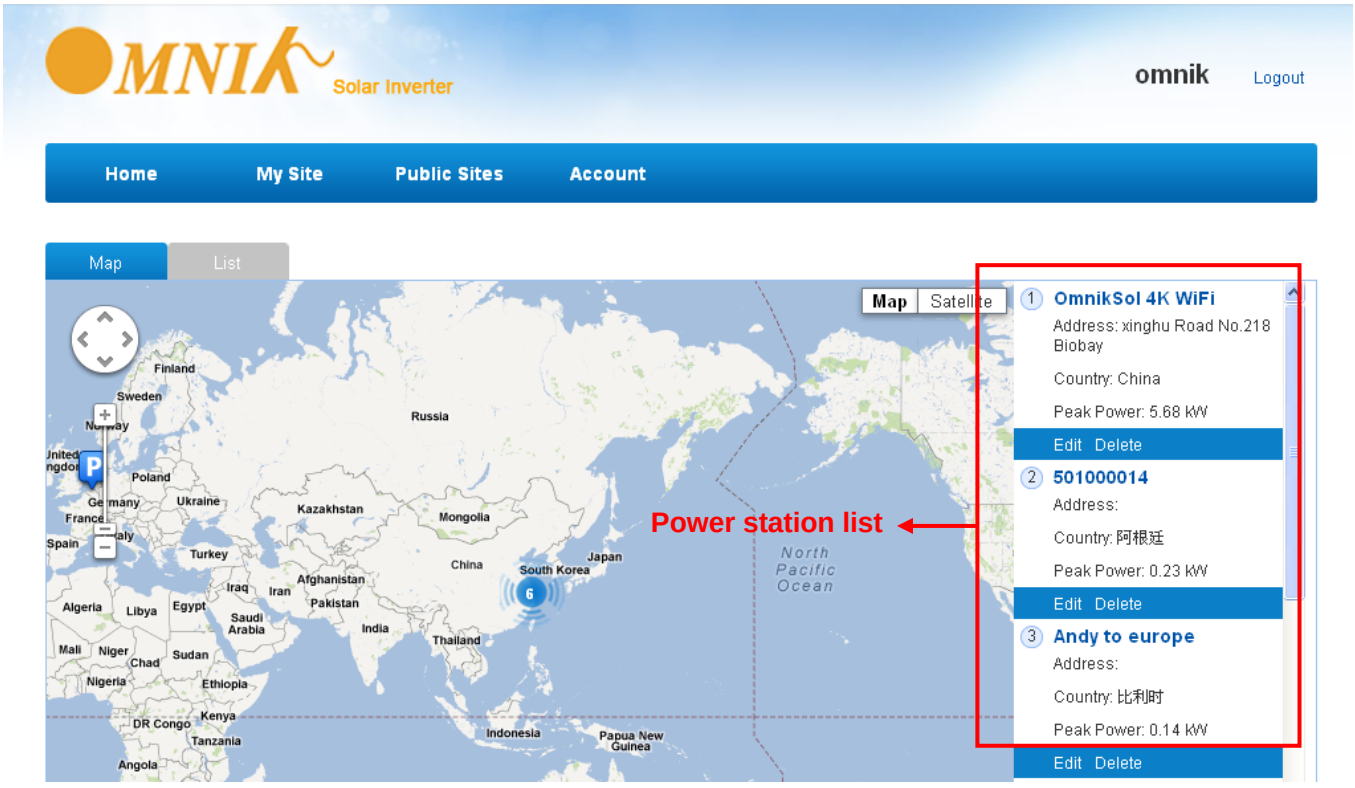
Now we finish the network setting, then you may login **www.omnikportal.com** to browse your data.

8. Login Monitoring System

After the successful register and account activation, open the login interface as below **picture 8-1**, input the correct email and code and enter the PV monitoring system, then you can monitor and manage the power station.

Picture 8-1

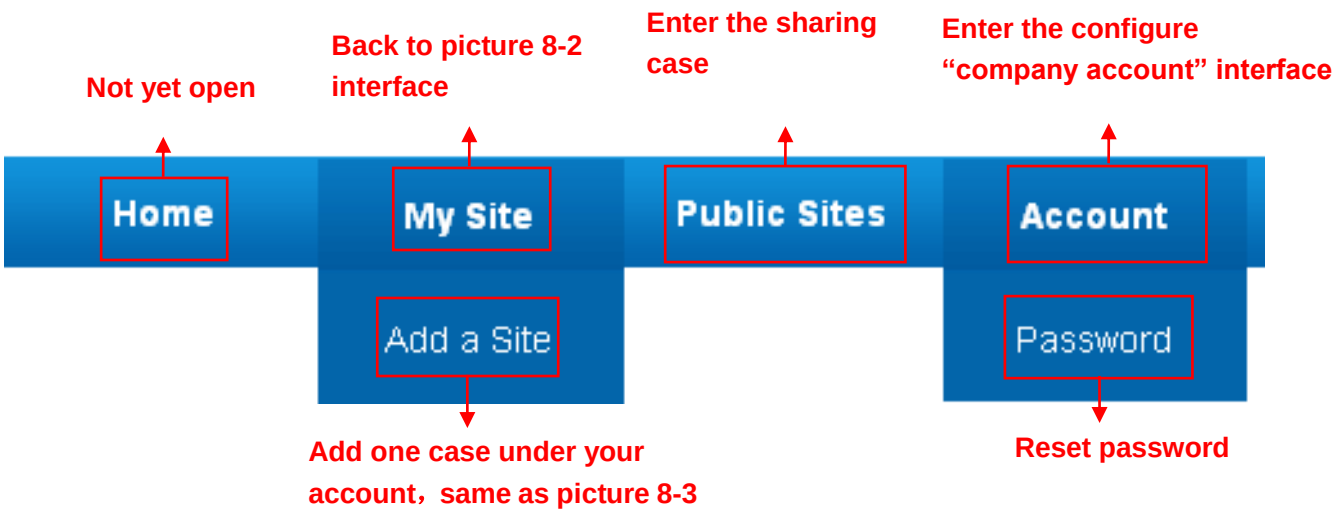
"End User" User Interface



Picture 8-2

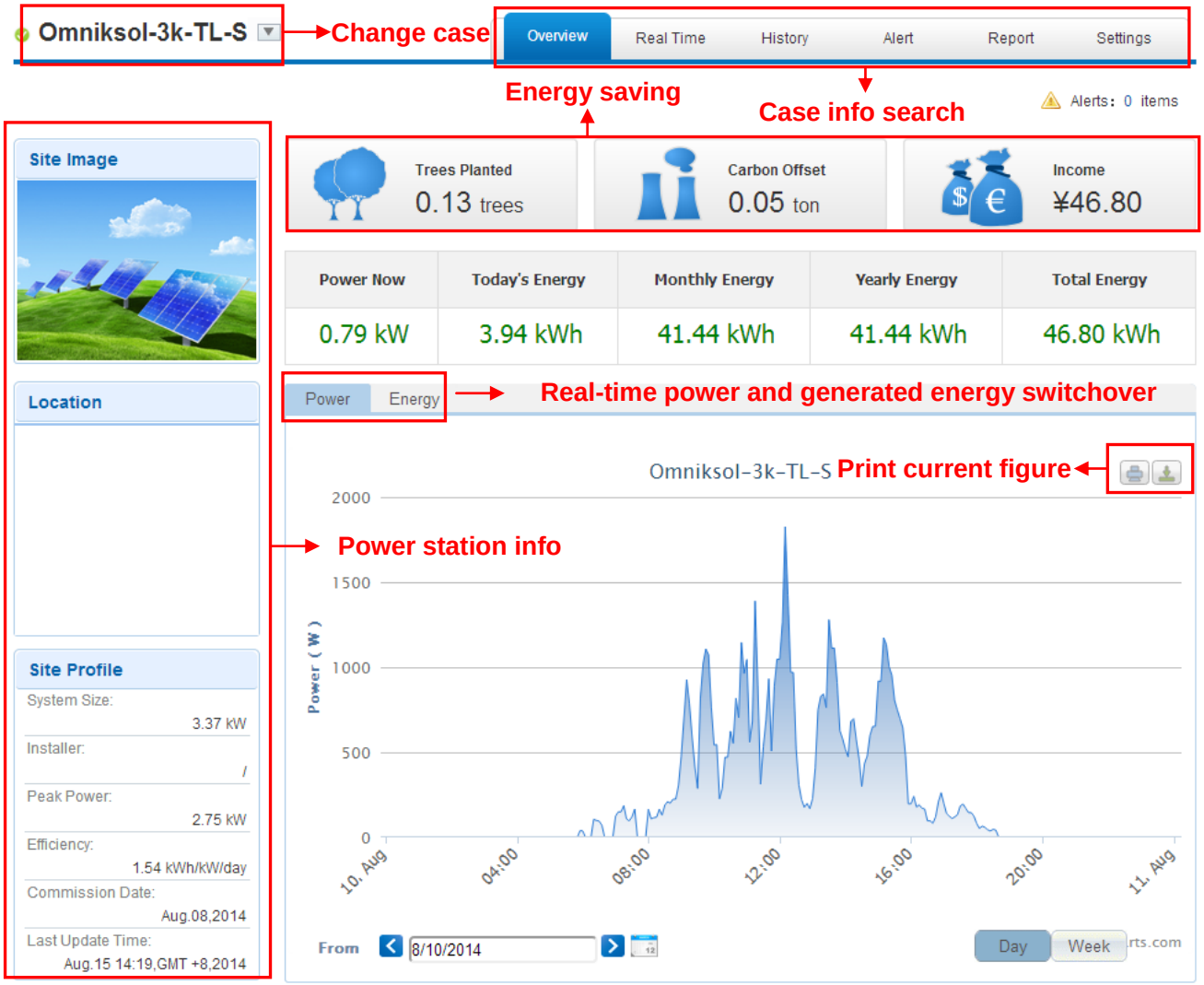
Picture 8-3

List of Power Stations



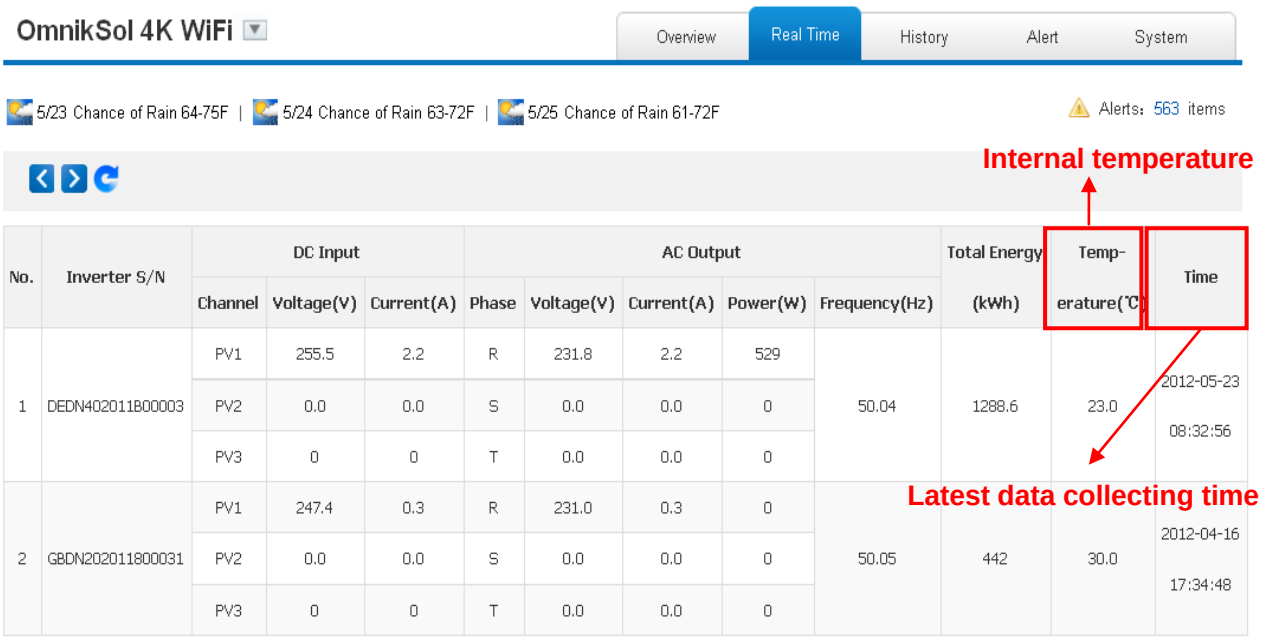
Picture 8-4

Navigation Bar



Picture 8-5

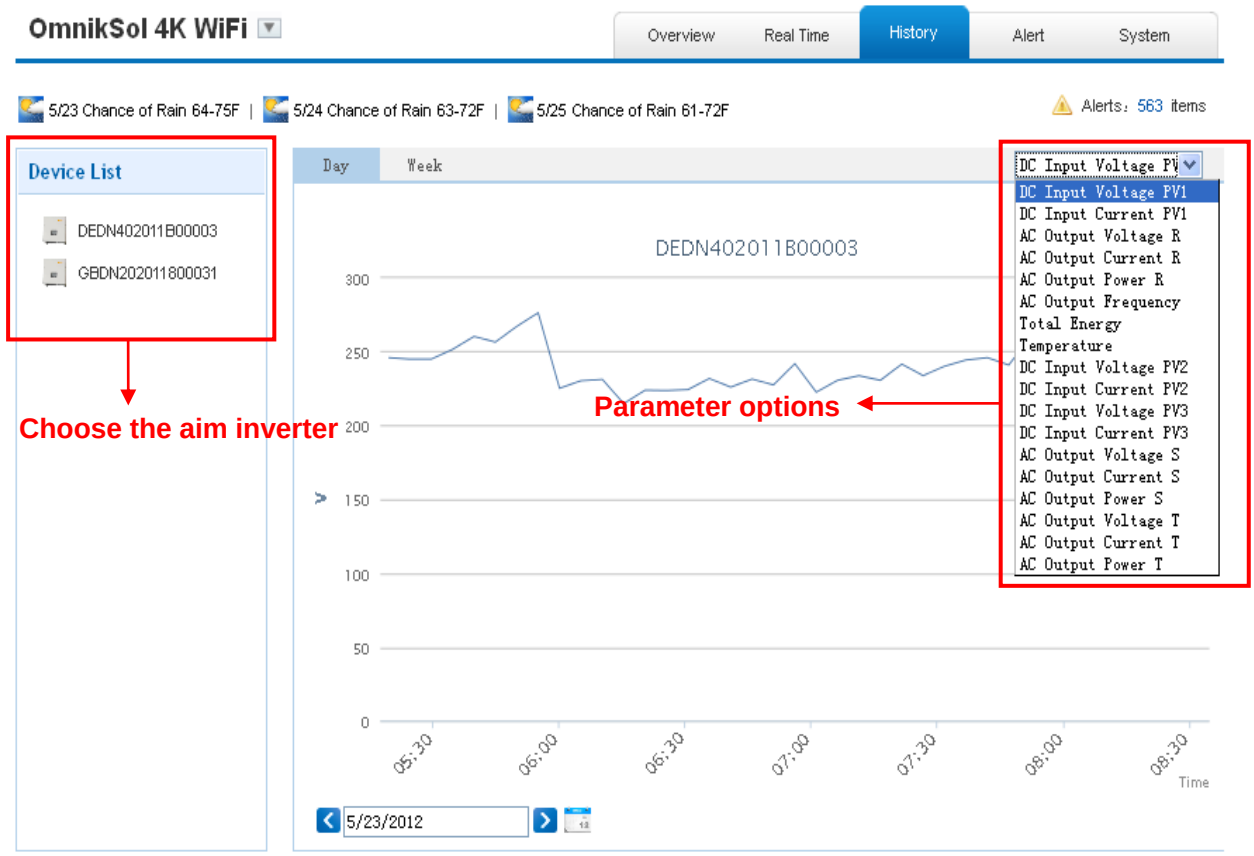
Main interface of Power Station



No.	Inverter S/N	DC Input			AC Output					Total Energy (kWh)	Temperature(℃)	Time
		Channel	Voltage(V)	Current(A)	Phase	Voltage(V)	Current(A)	Power(W)	Frequency(Hz)			
1	DEDN402011B00003	PV1	255.5	2.2	R	231.8	2.2	529	50.04	1288.6	23.0	2012-05-23 08:32:56
		PV2	0.0	0.0	S	0.0	0.0	0				
		PV3	0	0	T	0.0	0.0	0				
2	GBDN202011800031	PV1	247.4	0.3	R	231.0	0.3	0	50.05	442	30.0	2012-04-16 17:34:48
		PV2	0.0	0.0	S	0.0	0.0	0				
		PV3	0	0	T	0.0	0.0	0				

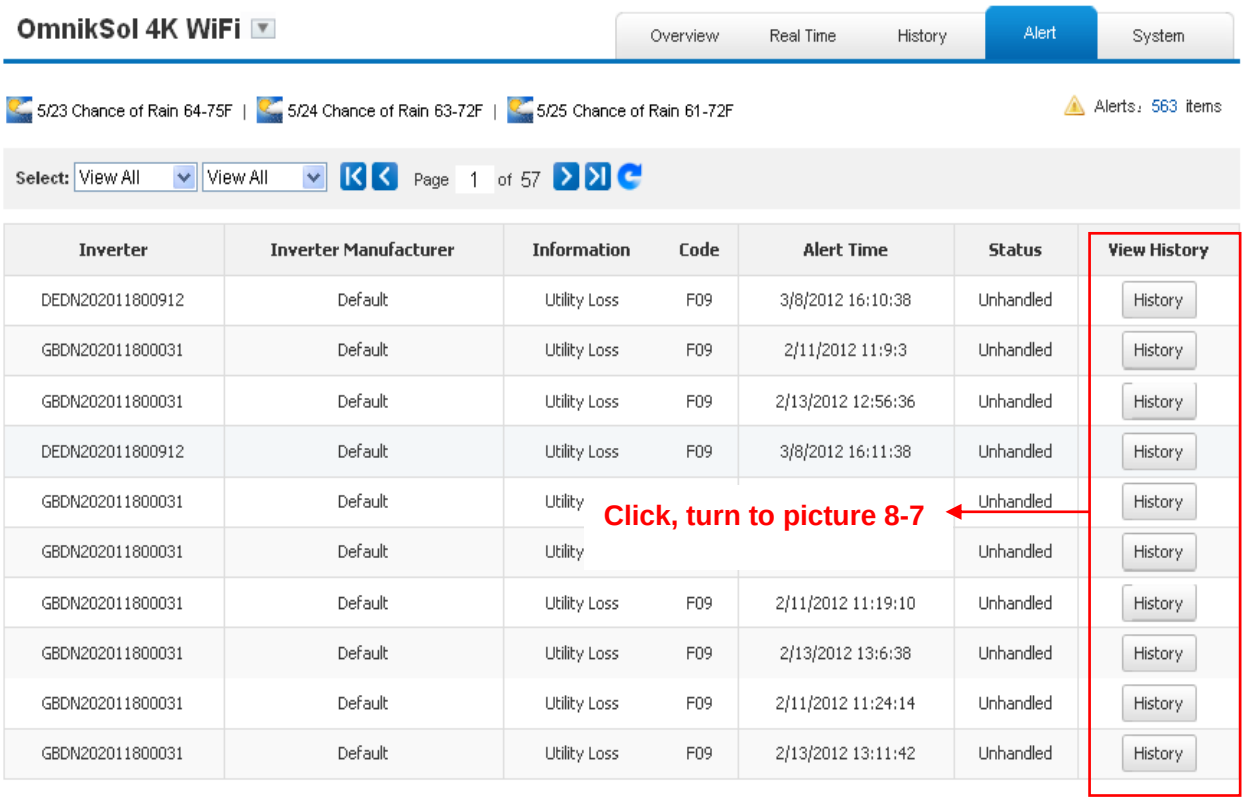
Picture 8-6

Real Time Interface



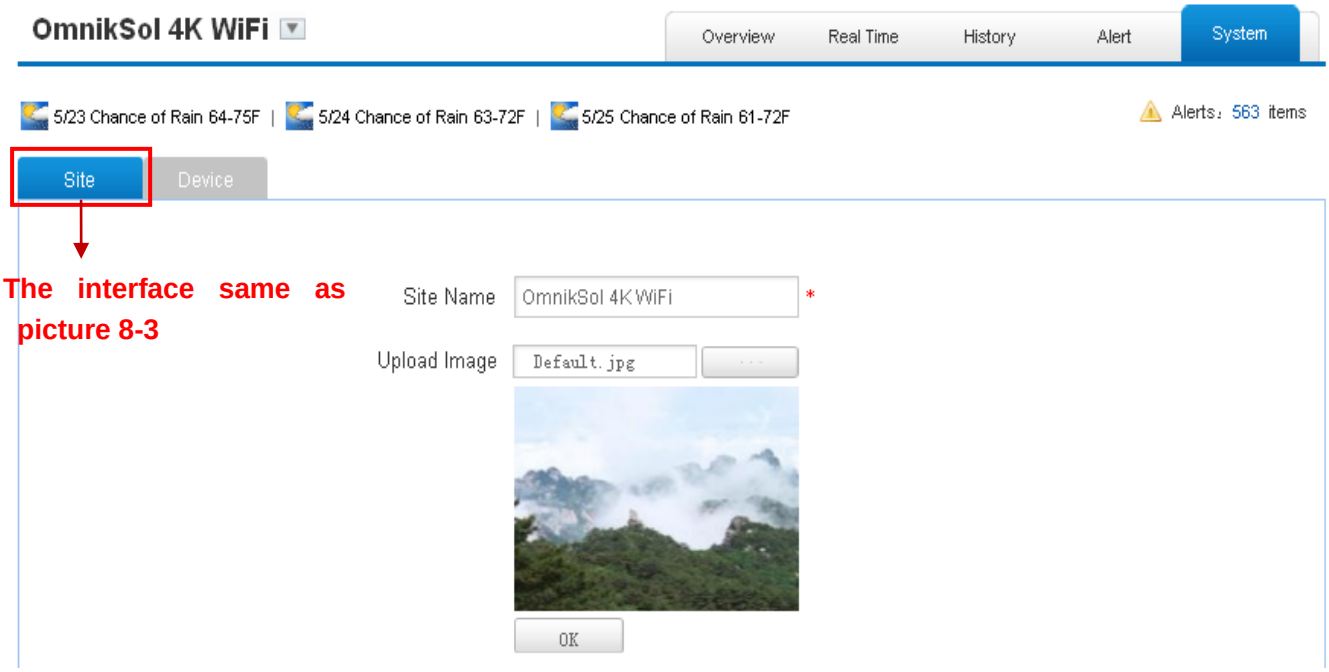
Picture 8-7

History Interface


OmnikSol 4K WiFi
Overview
Real Time
History
Alert
System
5/23 Chance of Rain 64-75F | 5/24 Chance of Rain 63-72F | 5/25 Chance of Rain 61-72F
Alerts: 563 items
Select: View All View All Page 1 of 57
Inverter | Inverter Manufacturer | Information | Code | Alert Time | Status | View History
DEDN202011800912 | Default | Utility Loss | F09 | 3/8/2012 16:10:38 | Unhandled | History
GBDN202011800031 | Default | Utility Loss | F09 | 2/11/2012 11:9:3 | Unhandled | History
GBDN202011800031 | Default | Utility Loss | F09 | 2/13/2012 12:56:36 | Unhandled | History
DEDN202011800912 | Default | Utility Loss | F09 | 3/8/2012 16:11:38 | Unhandled | History
GBDN202011800031 | Default | Utility | Unhandled | History
GBDN202011800031 | Default | Utility | Unhandled | History
GBDN202011800031 | Default | Utility Loss | F09 | 2/11/2012 11:19:10 | Unhandled | History
GBDN202011800031 | Default | Utility Loss | F09 | 2/13/2012 13:6:38 | Unhandled | History
GBDN202011800031 | Default | Utility Loss | F09 | 2/11/2012 11:24:14 | Unhandled | History
GBDN202011800031 | Default | Utility Loss | F09 | 2/13/2012 13:11:42 | Unhandled | History
Click, turn to picture 8-7

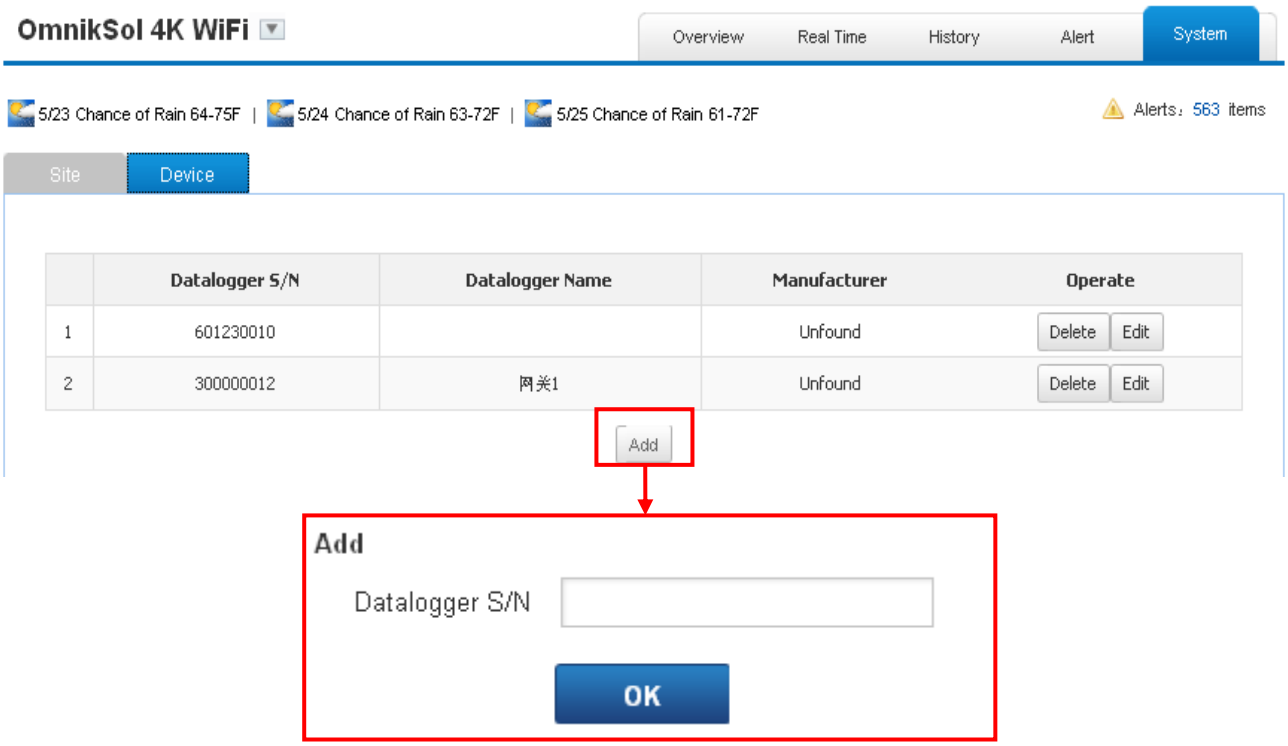
Picture 8-8

Alert Interface



Picture 8-9

System Setting Interface



Picture 8-10

System Setting Interface

9. iPhone & iPad Application

9.1 Auto Mode

After registration of the power station, you can input the key words: Omnik, solar, inverter, PV, energy, plant, monitor at the app store, then you can download the Omnik solar (iPhone) and Omnik Solar HD (iPad) at app store.

After the download input your user name and password, then visit your station, (we supply a free demo, for the users who do not register) choose the power station and enter the main interface, and then you the daily energy etc. will be displayed.

Meanwhile, you can view the relevant date to view the curve as below:

Picture 9-1

1. Log in interface
2. Power station list interface
3. Main interface
4. Daytime curve interface

9.2 Manual Mode

1) Step for monitoring without Internet connection (Manual Mode)

There are two methods to monitor the inverter via WiFi without the internet connection.

- Device connected directly to the Inverter WiFi.

Search the WiFi list on your smart device and connect to the relevant Inverter WiFi data logger beginning with AP_6xxxxxxx (as shown in the example below).

Open **"Solar View"** on your device (which you should have downloaded from Apple APP store), and choose **"Manual Mode"**. You are now able to monitor the inverter and the power being generated through it.

This example shows device connection to an inverter with 601184936 WiFi:

- Both the Inverter WiFi and monitoring device (Smart Devices using IOS) connected to the LAN (not Internet) via the wireless router. Please follow instructions from **7. Network Settings** (In AP mode by WiFi).

After finishing the above procedures, launch the **"Solar View"** on your device and click **"manual mode"**. You are now able to monitor the inverter and the power being generated through it.

Picture 9-2

2) Features

a. Monitoring WiFi device without internet connection.
b. Display all the relevant data from the inverter.
c. Local access is much faster, and does not rely on external networking.
d. Same functions as online monitoring system.

Picture 9-3

1.Choose interface
2.Connect WiFi card ok
3.Setting page
4.Inverter information

10. Contact

If you have any technical problems about our products, please contact us, you should confirm the follow things before contact us:

- Device model
- Data collector serial number
- The number of connected inverter

Add: Xinghu Road No.218 bioBAY Park A4, Suzhou China

Zip code：215213

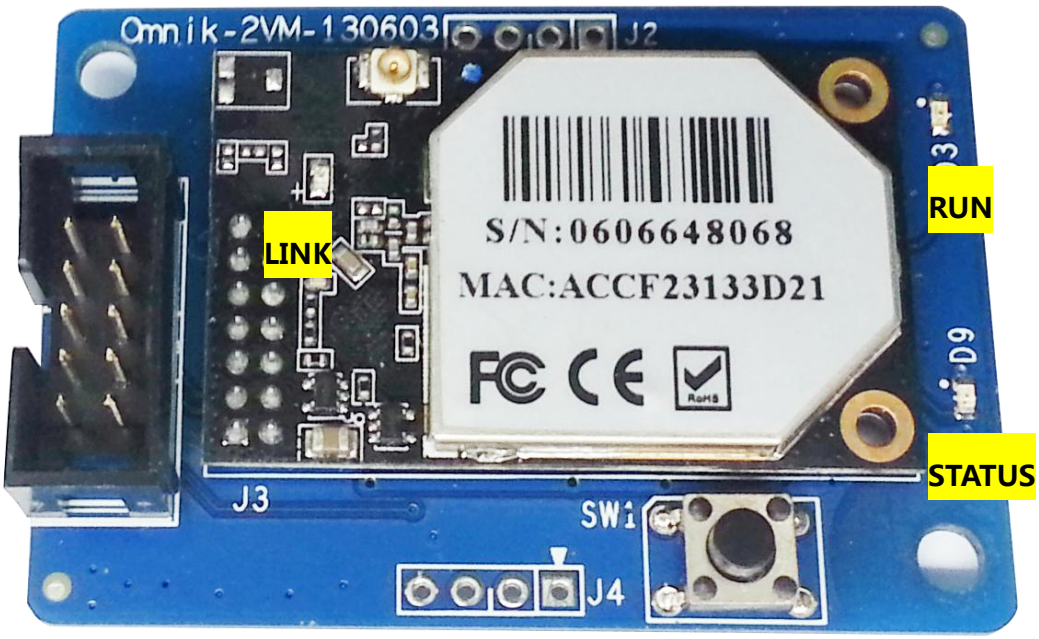
Fax: +86 512 6295 6682

Tel: +86 512 6295 6676

Mail: Sales@omnik-solar.com

Appendix.

1. LED Indicators



Picture A1

LED Name	Status	Description
RUN	On/Blinking	Module is working
	Off	Module is not working
LINK	On	Module is successfully connected to the server by WiFi under STA mode
	Blinking	The WiFi module is in AP mode
	Off	In STA mode; No WiFi connection or no connection to the server
STATUS	On	Communication with the inverter is working
	Blinking	Communicating with the inverter (transferring data)
	Off	Communication with the inverter is not working

2. Troubleshooting

Status			Possible Causes	Solution
RUN	**LINK**	**STATUS**		
On/Blinking	On	On	Connection is successful	No need
On/Blinking	On	Blinking	Communicating with the inverter	No need
Off	Off	Off	No power connection	Check if the connecting fingers are contacting properly
				Check if the inverter is working properly
On/Blinking	Off	Off	Inverter connection is abnormal	Check if the inverter is working properly
			Resetting or initializing	Check the LEDs again after 1 minutes
			WiFi connection is not successful	Change the position of the inverter or the antenna to get better signal reception
			Antenna is not properly connected	Check if antenna is connected properly. Screw tight if loose
On/Blinking	On	Off	Communication with the inverter is abnormal	Check if the connecting fingers are contacting properly
On/Blinking	On	X	Connection of the data collector is abnormal	Check the setting of AP wireless router
				Check the WiFi settings

Note 1：X means status unknown.

Note 2：If the device is still not working after above operations in the table, please try resetting the device. If it is still not working after the reset, please contact customer service of the manufacturer.